

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7**11201 Renner Boulevard
Lenexa, Kansas 66219

SEP 07 2018

MEMORANDUM

SUBJECT: August 2018 Field Work Report
CW Process, Cedar Rapids, Iowa
EPA ID # IAD005277256

FROM: Dan Gravatt, Geologist *D. Gravatt*
RCRA Corrective Action and Permits Section
Waste Remediation and Permitting Branch
Air and Waste Management Division

TO: File, CW Process

On August 27, 2018, myself, Lorenzo Sena and James Regehr mobilized to the former CW Process facility at 5051 Southwest Williams Boulevard in Cedar Rapids, Iowa to perform soil and groundwater sampling in accordance with the approved QAPP. We arrived on site at approximately 1:45 PM and met with [REDACTED] the tenant at the site (phone [REDACTED]). She and her son [REDACTED] raise sheep and chickens on the property. She showed us around the property and helped us determine routes to move the geoprobe around the various animal pens and remnant structures to access the planned sampling points. Some of the remnant structures are being used partly or entirely as run-in sheds for livestock, and chicken coops are being built just south of the former main manufacturing building, over the former treatment pond. Old temporary monitoring wells (probably TMW-4, TMW-5 and TMW-7, see the CW Process Phase 2 Report, Part 2, dated March 30, 2005, prepared for the [REDACTED] Estate by Blackhawk Environmental Testing) were observed to still be present, with unlocked J-plugs installed in TMW-4 and TMW-5. The screen interval for TMW-4 was observed to extend approximately 6 inches above ground surface. Two bare spots approximately 8 feet in diameter were noted in the "Fiberglass Tailings Pile" area (see the CWProcessCoWayneMfg_Overview13June2017.pdf site summary prepared by Brad Hayworth of AWMD/WRAP, page 4) and some clay tile pipe fittings were on the surface between these spots and the "Underground Leaching Bed" designated in that document. The location of the underground leaching bed was not obvious as we walked the site. Other than these areas and the gravel parking area and driveway leading south from Williams Boulevard, the site and the adjacent farm field were heavily vegetated, though vegetation on the areas accessible to the sheep was short. The adjacent property to the east has had its home demolished and removed, and a sign there states that it is the future home of a church. The adjacent property to the west, owned by [REDACTED] (phone [REDACTED]), is planted with corn except in a heavily vegetated drainage swale running approximately southwest from the fiberglass tailings pile area. This swale drops off approximately 8 feet from the otherwise level CW Process property before transitioning to a gentler grade as it crosses the cornfield. The utility locate I requested had been properly processed; the only on-site utility is buried communication cable leading south from Williams Boulevard along the west side of the driveway to a telephone pole just west of the abandoned residence on-site. This is not near any of our planned sampling points.

Ms. [REDACTED] indicated that her son [REDACTED] was buying the former CW Process property "on contract" from [REDACTED] the current owner (phone [REDACTED]), but that this transaction had not been completed yet. She was apprehensive about this purchase after learning why the U.S. Environmental Protection Agency Region 7 is sampling the property, and asked for copies of the historic sampling reports for the property and the results for the samples we collect during this fieldwork. I asked her where she got the water she uses on the property for her livestock, and she indicated she hauls water to the site.

No site photos were taken during this fieldwork.

Lorenzo and James deployed the geoprobe and began installing the temporary monitoring wells and the shallow soil borings by approximately 3:00 PM on August 27. Wells 1 through 6 and soil borings 11 and 13 were installed on August 27. See the table below for coordinates and details for each location. All wells were installed using 1" PVC screens and risers, with 5-foot screens and slip-on top caps. Target depth for the screened intervals at each well was 15-20 feet deep, based on historical groundwater sampling results for the site. The initial push location for Well 2 met refusal at 17 feet, so the location was offset 5 feet to the west and pushed to the target depth of 20 feet, and the initial Well 2 boring was sealed with bentonite chips. Soil samples for Well 2 were collected from the initial push location. The wells were not surveyed for top-of-casing elevation (because the EPA does not have an in-house surveying capability), so no groundwater flow map can be prepared. Soil samples at 0-1 foot and 4-5 feet depth were collected at every well and soil boring location using disposable acetate liners. We demobilized from the site for the day at approximately 7:15 PM.

We returned to the site on August 28 at approximately 6:30 AM and installed Wells 7 and 8 and soil borings 9, 10, 12 and 14-16. All eight of the soil boring locations were subsequently backfilled with bentonite chips. I collected a rinsate sample of the geoprobe drive shoe after the final sample location, and then Lorenzo and James demobilized from the site at approximately 11:00 AM to decontaminate the geoprobe and drive back to Kansas City. I finished collecting samples from this morning's soil borings and wells, including three duplicate pairs of soil samples, and then began collecting groundwater samples from the wells installed August 27. All groundwater samples were collected using 3/8" diameter polyethylene tubing and inertial foot valves. Due to the known very low yield of the shallow aquifer, all water samples were collected as grab samples with no purging, and as a result sample turbidity was significant in all samples, particularly from wells 2 and 4. Well 1 yielded enough water to collect a primary sample and a field duplicate for cyanide, and a primary sample for SVOCs, but the well went dry repeatedly during sampling and I had to wait for it to recharge. Well 2 yielded enough water for cyanide and SVOC primary samples, again going dry repeatedly during sampling. Well 3 yielded only approximately 100 mL of water, barely enough for a cyanide primary sample; no SVOC water sample was possible for this well. Well 4 yielded enough water for a cyanide primary sample but not enough for a SVOC water sample.

Coordinates for each well and soil boring were collected using a hand-held Garmin GPS receiver.

Wells 5 and 6, installed August 27 were absolutely dry when checked around noon today. Wells 7 and 8, installed the morning of August 28 were absolutely dry when checked around 2:30 PM. I plan to re-check these wells tomorrow and sample if they yield any water.

There were intervals of rain today (August 28), with more predicted overnight.

[REDACTED] visited the site at approximately 2:00 PM to see our sampling locations and discuss his plans for cleaning up the portion of his property that was used by CW Process and is still occupied by

remnant structures, at least one abandoned vehicle, and various surface debris. He asked my opinion on whether it was okay for him to remove the buildings, vehicle, surface debris and cut down trees on his property to clean it up in preparation for future use, and was concerned about potential soil contamination in the area. I told him that the fieldwork and sampling currently underway would not definitively establish the presence or absence of contamination in this area, and recommended that he not dig up the soil in the process of removing these items. I also discussed with him the potential for abandoned hazardous materials stored in the remnant structures, and recommended that he contact the Iowa DNR for assistance in evaluating and identifying any such materials that he might find in them. I also pointed out to him the bare spots in the drainage swale extending onto his property and told him I suspected they were substantially contaminated.

I departed the site for the day at around 3:30 PM and returned to my hotel room to manage sample documentation.

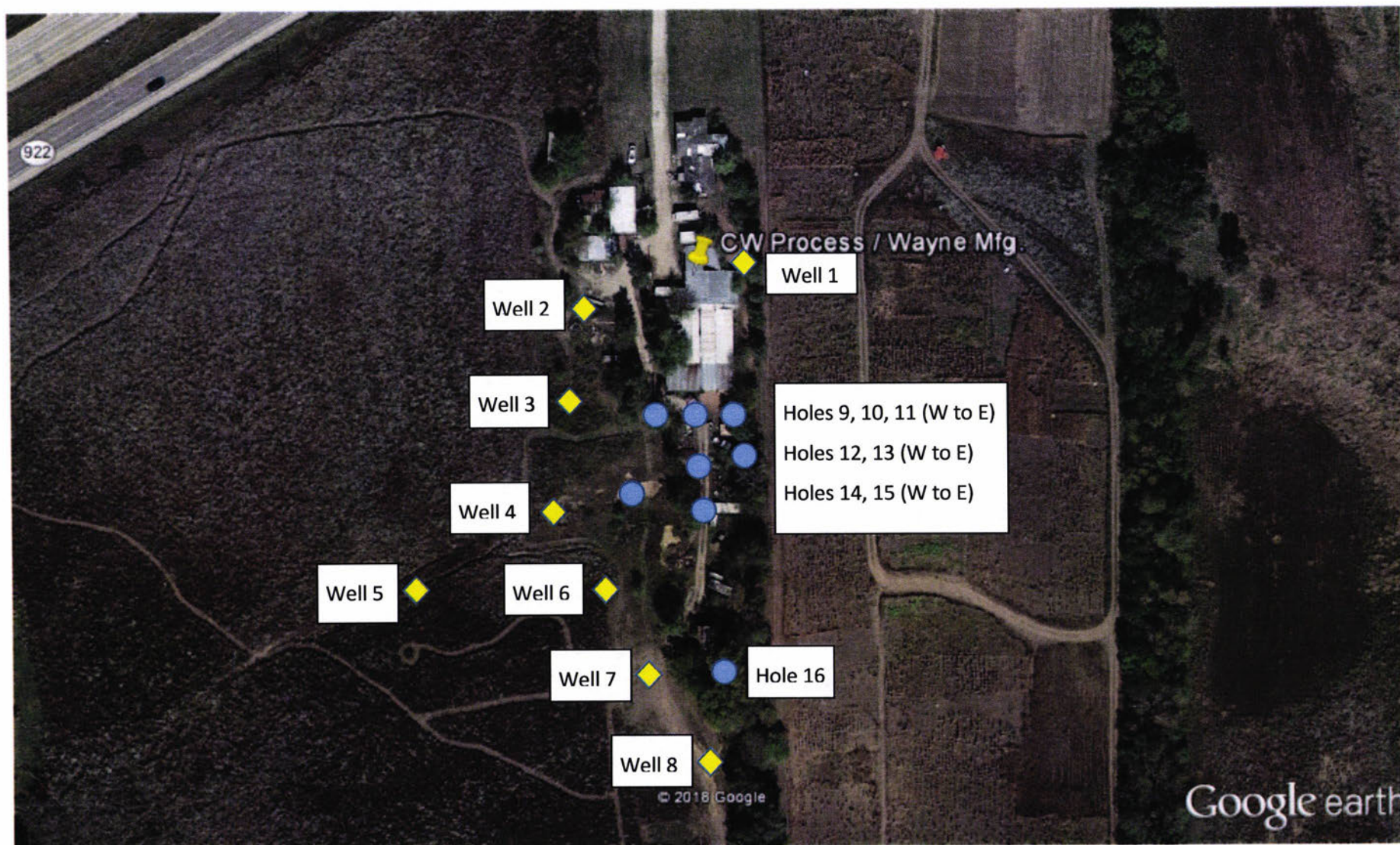
I returned to the site on August 29 at approximately 7:00 AM and re-checked wells 5, 6, 7 and 8 for any groundwater production. Wells 5, 6 and 8 were still absolutely dry. Well 7 was full to within a couple of feet of the ground surface. It was obvious that the surface seal on this well had failed and the heavy overnight rains had filled the well bore. As the water in the well was not representative of groundwater, no sample was collected at Well 7.

The pattern of groundwater occurrence at the site, from both this investigation and the May 20, 2011, RCRA Site Sampling Report conducted for the EPA by Booz-Allen Hamilton, indicates shallow groundwater yield is low in the northern and central portions of the production area at the CW Process site and negligible in the south and west portions of the site and the adjacent property to the west. While each sampling location was only logged from 0-5 feet, and the remaining depth of the temporary well borings were pushed without sampling or logging, it appears that the sand content, and thus the hydraulic conductivity, of the shallow glacial till underlying the site generally decreases from northeast to southwest across the area. This may have the effect of containing the shallow groundwater contamination near the release points at the site. If so, this suggests that the cyanide found in surface water at location 004 during the RCRA Site Sampling event of 2011 (where the drainage swale leading from the CW Process site crosses 33rd Street to the southwest) made its way there via surface water (contaminated by flowing over surface soil) or a groundwater discharge point to surface water on the CW Process site, rather than via groundwater migration. One such contaminant source may be the bare spots at the fiberglass tailings pile, which are on the southern end of the topographic slope that separates the production area of the site from the cornfields to the west.

I revisited well 4 one last time to see if it had recovered enough to provide an SVOC sample, but yield was still insufficient. I revisited well 2 and was able to collect a QC sample for SVOCs (matrix spike / lab duplicate), though the well still ran dry and I had to wait for it to recover. I removed all our trash and equipment from the site (except the eight temporary wells) and departed at approximately 9:00 AM for Kansas City. I submitted the samples to Nicole Roblez and worked with her to correct minor errors in my sample documentation, then unloaded and stored surplus field supplies at the lab before returning to the regional office.

I plan to return to the site after the laboratory results are received, to seal and abandon the temporary wells (if no laboratory issues were encountered) or to collect additional groundwater samples for any wells where the initial laboratory analyses were unusable. I recommend that we also abandon the three remaining temporary wells TMW-4, -5 and -7 that were installed on behalf of the [REDACTED] Estate, which may represent vertical conduits for contaminant migration.

Well/Boring	Latitude	Longitude	Screen Interval	Recovery, 0-5'	General Lithology, 0-5'
Well 1	41.94576 N	-91.73212 W	15-20'	60%	Brown to orange soft clay from 0-3', then orange fine wet sand to 5'
Well 2	41.94746 N	-91.73257 W	15-20'	100%	Gravel fill 0-1', gray to dark brown clay 1-4', brown-orange sandy clay 4-5'
Well 3	41.94715 N	-91.73260 W	14-19'	60%	Soft black clay 0-1', transitions to brown-orange clay by 4', brown - orange sandy clay 4-5'
Well 4	41.94696 N	-91.73270 W	14.5-19.5'	75%	Soft brown clay 0-1', then hard brown clay 1-5' with trace sand at 5'
Well 5	41.94680 N	-91.73301 W	14.5-19.5'	65%	Stiff dark brown clay from 0-5', slightly softer at 3-4', slightly crumbly at 0-2'
Well 6	41.94683 N	-91.73255 W	14.5-19.5'	40%	Soft dark brown clay 0-1', transitioning to soft brown-orange clay by 5', sandy at 5'
Well 7	41.94658 N	-91.73242 W	14.5-19.5'	100%	Soft dark brown clay 0-1', then firm brown-orange clay to 5', some sand at 4-5'
Well 8	41.94643 N	-91.73238 W	14.5-19.5'	100%	Soft dark brown clay 0-0.5', firm brown-orange clay to 4', becoming sandy 4-5', all sand at 5', dry
Boring 9	41.94722 N	-91.73239 W	N/A	95%	Soft brown clay with fill gravel 0-0.5', then brown-orange clay to 3.5', then brown clay to 5', with trace sand 4-5'
Boring 10	41.94721 N	-91.73226 W	N/A	95%	Brown clay with gravel 0-1', then hard brown clay 1-3.5' with gravel from 2.5-3.5', then soft brown clay to 5', slight odor at 5'
Boring 11	41.94728 N	-91.73209 W	N/A	60%	Brown-orange sandy clay 0-5', damp and hard at 5'
Boring 12	41.94710 N	-91.73224 W	N/A	95%	Hard brown clay with fill gravel 0-0.5', orange-brown hard clay 0.5-3', black soft clay to 5' with petroleum odor 4-5'
Boring 13	41.94713 N	-91.73208 W	N/A	95%	Brown-orange sandy clay 0-4', transitions to fine wet sand at 5'
Boring 14	41.94702 N	-91.73224 W	N/A	100%	Dark brown soft clay 0-1', then brown-orange clay to 5', trace sand 4-5', gravel piece at 2.5', damp from 1-2.5'
Boring 15	41.94695 N	-91.73224 W	N/A	60%	Brown clay with fill gravel 0-1', soft brown clay to 5' with sand and gravel from 4-5'
Boring 16	41.94646 N	-91.73229 W	N/A	90%	Clay with fill gravel 0-1', hard brown-orange clay with gravel to 5'



Google Earth Pro

feet
meters

